

REMARKS

Claims 1 - 17 have been previously canceled and claim 18 is currently amended, Claim 33 is cancelled herein and replaced by new claim 34. Thus, claims 18 - 32, and 34 are currently pending and presented for examination. Applicant respectfully requests reconsideration and allowance of the pending claims in view of the foregoing amendments and the following remarks.

Applicant submits that support for these amendments can be found in the disclosure as originally filed, including paragraphs 0031, 0034 - 0037, and Figure 4, and therefore no new matter has been added.

Response to Rejections Under Section 103:

Claims 18 - 22 and 25 - 33 are rejected under 35 U.S.C. §103(a) as being unpatentable over Rosen et al. in view of Rekhter (US 5,917,820). Claim 23 is rejected over Rosen et al. in view of Rekhter further in view of Teraslinna. Claim 24 is rejected over Rosen et al. in view of Rekhter further in view of Cisco. In view of the amendments and following remarks, Applicant respectfully requests the rejection be withdrawn.

To establish *prima facie* obviousness of a claimed invention, all words in a claim must be considered for judging the patentability of the claim against the prior art. Without conceding the propriety of the asserted combination, Applicant respectfully submits that the asserted combination does not disclose or teach certain features of the claims, for at least the following reason.

Rosen describes Multiprotocol Label Switching (MPLS). In MPLS, the stream to which the packet is assigned is encoded with a short fixed length value known as a "label". The label is used as an index into a table which specifies the next hop, and a new label. The old label is replaced with the new label, and the packet is forwarded to its next hop. Labels are bound to a specific FEC and tables are built. A router which supports MPLS is known as a "Label Switching Router". LSR's maintain for each of their LSP's an LSR id list. This list is a list of all the LSR's downstream from this LSR on a given LSP. The LSR id list is used to prevent the formation of

switched path loops. On receipt of label bindings, each LSR creates entries in the label information base (LIB). The contents of the table specify the mapping between a label and an FEC.

It is known that in MPLS the label itself has no meaning other than what the software gives it. Therefore, the label can be used to implement any forwarding method. The present invention can take advantage of the MPLS labeling capability to create its own unique forwarding arrangement and tables that are not shown or described in the references of record.

Specifically, the labels and tables in the present invention comprise IL/EL pairs in the label appended to a packet and IL/EL pairs in a routing table in each node for next hop information wherein the EL is determined by the destination table. The invention also provides alternative loop-free routes for the forwarding of the data packet in the routing table for each IL/EL pair when an alternate next hop is available, because the ingress node identified by the IL is excluded as an alternative route, unlike classical IP routing which only takes into consideration the destination address of a packet. A further advantage of the invention is that the routing tables are substantially reduced in size and, by combining the data fields IL and EL to form a "pseudo" MPLS label, the communication format can be kept "compatible" with MPLS. This unique assignment of labels, arrangement of table contents, and loop-free routing is not shown or described in Rosen.

Rekhter does not remedy the shortcomings of Rosen. Rekhter describes a packet forwarding arrangement for next hop determinations using a next hop tag database wherein next hops are associated with a destination address prefix. The tag generator assigns a short locally unique tag to groups of destination addresses and is stored in a local tag component associated with the destination address prefix in a tag database. All destination addresses having the same destination address prefix are associated with the same local tag by the tag generator. As previously mentioned, the labels and tables in the present invention comprise IL/EL pairs in the label of the packet and IL/EL pairs in routing tables for each node for next hop information wherein the EL is determined by the destination table. This unique assignment of labels, arrangement of table contents, and loop-free routing is not shown or described in Rekhter. Moreover, neither Teraslinna nor Cisco remedy the shortcomings of Rosen/Rekhter.

Therefore, claims 18 - 32 and new claim 34 are patentable over the art of record and Applicant respectfully requests the Examiner withdraw the Section 103 rejections.

Conclusion

Accordingly, Applicant submits that all claims are in condition for allowance and request that a Notice of Allowance be issued. The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, including the fees specified in 37 C.F.R. §§ 1.16 (c), 1.17(a)(1) and 1.20(d), or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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